ABSTRACT

After a slurry containing powdered silicon and a resin used as a carbon source is applied by impregnation to a carbon powder-made porous structural body having a bone structure, which is formed from powdered carbon, and is then carbonized at 900 to 1,300°C in a vacuum or an inert gas atmosphere, reaction sintering is performed at a temperature of 1,300°C or more in a vacuum or an inert gas atmosphere. Accordingly, since a carbonized porous structural body can be obtained which has open pores generated by a volume-reduction reaction at the same time when porous silicon carbide having a good wettability to molten silicon is formed, this carbonized porous structural body is impregnated with molten silicon at a temperature of 1,300 to 1,800°C in a vacuum or an inert gas atmosphere.